

nucleation feature adapted to interact with the acoustic field to impart the motion to the fluid, and 2) the apparatus and method selectively directing the acoustic field to at least one nucleation feature located relative to the fluid to impart the motion to the fluid. The Office Action indicates that the Applicants have to elect a single disclosed species, a single disclosed sub-species, and a single subspecies-indent.

Applicants elect, with traverse, the apparatus and method of selectively directing the acoustic field to at least one nucleation feature location relative to the fluid to impart the motion to the fluid. Thus, Applicants elect, with traverse, independent claims 38 and 113.

The Office Action also indicates that the Applicants have to elect one of two subspecies of the focal zone. Applicants elect, with traverse, the subspecies relating to interacting the at least one nucleation feature with the acoustic energy in a focal zone of the acoustic source. Thus, Applicants elect, with traverse, claims 40 and 115.

The Office Action additionally indicates that the Applicants have to elect a subspecies of the surface. Applicants elect, with traverse, the subspecies of the surface wherein the first surface is a surface of a microchamber. Thus, Applicants elect, with traverse, claims 43, 45, 118, and 120.

The Office Action also indicates that the Applicants have to elect a subspecies of the nucleation feature positioned at a first surface. Applicants elect, with traverse, the subspecies wherein the at least one nucleation feature includes at least one of a pit, crevice, defect, scratch, groove, and ridge in the first surface. Thus, Applicants elect, with traverse, claims 47 and 122.

The Office Action additionally indicates that the Applicants have to elect a subspecies of the size of volume of the device. Applicants elect, with traverse, the subspecies with a fluid that has a volume between about 0.1 pl and about 10 ml. Thus, Applicants elect, with traverse, claims 51 and 126.

The Office Action also indicates that the Applicants have to elect a subspecies of the fluid containment device. Applicants elect, with traverse, the subspecies wherein the fluid is contained in a microchamber. Thus, Applicants elect, with traverse, claims 54 and 129.

The Office Action additionally indicates that the Applicants have to elect a subspecies of acoustic field generation operation parameters. Applicants elect, with traverse, the subspecies wherein the motion imparted to the fluid is of sufficient magnitude to cause a mixing action in the fluid. Thus, Applicants elect, with traverse, claims 63 and 137.

The Office Action also indicates that the Applicants have to elect a subspecies of the positioning or alternately directing of an acoustic field. Applicants elect, with traverse, the subspecies of positioning the at least one nucleation feature relative to an active site, and the step of providing the acoustic field further comprises, providing the acoustic field with selected characteristics to promote mixing of a portion of the fluid proximate to the active site. Thus, Applicants elect, with traverse, claims 68 and 142.

The Office Action also indicates that the Applicants have to elect a subspecies for the number of acoustic sources. Applicants elect, with traverse, the subspecies of a single acoustic source. Applicants submit that no additional claim election is needed for this subspecies election, as this subspecies falls within independent claims 38 and 113.

Further, the Office Action indicates that the Applicants have to elect a subspecies of fluid. Applicants elect, with traverse, the subspecies where a constituent is a biological sample. Thus, Applicants elect, with traverse, claims 77 and 151-153.

The Office Action also states that the Applicants have to elect a species of direction of an acoustic field. The Applicants elect, with traverse, directing the acoustic field which further comprises focusing the acoustic field to the at least one nucleation feature. Thus, the Applicants elect, with traverse, claims 39 and 114.

CONCLUSION

Upon entry of this paper, claims 39, 40, 68, 77, and 115 are amended and claims 1-37, 41-44, 46, 48-50, 52-53, 55-62, 64-67, 69-76, 78-112, 116-119, 121, 123-125, 127-128, 130-136, 138-141, and 143-150 are cancelled. Claims 38-40, 43, 45, 47, 51, 54, 63, 68, 77, 113-115, 118,

120, 122, 126, 129, 137, 142, and 151-153 are pending. The Examiner is invited to contact the undersigned to discuss any outstanding issues. Early favorable action is respectfully requested.

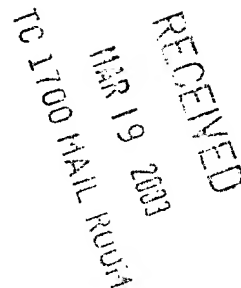
Respectfully submitted,

A handwritten signature in black ink, appearing to read "John V. Bianco", written over a horizontal line.

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MARKED-UP COPY OF AMENDED CLAIMS

39. (Amended) The method of claim 38, wherein said step of directing said acoustic field [further] comprises, focussing said acoustic field to said at least one nucleation feature.
40. (Amended) The method of claim 38, wherein said step of directing said acoustic field [further] comprises, adjusting a relative position between said acoustic source and said at least one nucleation feature to bring said at least one nucleation feature within a focal zone of said acoustic source.
68. (Amended) The method of claim 38 [further] comprising,
positioning said at least one nucleation feature relative to an active site, and said step of providing said acoustic field [further] comprises, providing said acoustic field with selected characteristics to promote mixing of a portion of said fluid proximate to said active site.
77. (Amended) The method of claim 151[763], wherein said constituent is a biological sample.
115. The apparatus of claim 113 [further] comprising, a positioning mechanism adapted adjust a relative position between said acoustic source and said at least one nucleation feature, to bring said at least one nucleation feature within a focal zone of said acoustic source.
151. (New) The method of claim 38, wherein said fluid is contained in a microvessel having a constituent.
152. (New) The apparatus of claim 113, wherein said fluid is contained in a microvessel having a constituent.
153. (New) The apparatus of claim 152, wherein said constituent is a biological sample.